

COMBINATION HVAC AND AUXILIARY ENGINE COOLING

ABSTRACT OF THE DISCLOSURE

5 A vehicle heat transfer module including a conduit for air circulation, an evaporator in the conduit between the cabin air input and cabin air output, and a heater having vehicle engine coolant circulated therethrough, the heater being in a first path between the evaporator and the cabin air output. A first door selectively opens or closes the fresh air input and fresh air output, and a second door blocks a selected amount of cabin air from the first path. A controller controls the first and second doors responsive to heating and cooling requirements. Cabin and fresh air is selectively circulated over the heater and evaporator responsive to detected requirements, including selectively either (a) circulating cabin air from the cabin air input over the evaporator and out the cabin air output, and circulating fresh air from the fresh air input over the heater and out the fresh air output, or (b) blocking the fresh air input and fresh air output and passing cabin air from the cabin air input over one or both of the evaporator and the heater and out the cabin air output.

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